

EXHIBIT 16

(Excerpted)

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION**

Sonos, Inc.,	§	
	§	
Plaintiff,	§	No. 6:20-cv-881-ADA
	§	
v.	§	
	§	
Google LLC,	§	
	§	
Defendant.	§	

DECLARATION OF DOUGLAS C. SCHMIDT

I, Douglas C. Schmidt, hereby declare as follows:

I. SCOPE OF ASSIGNMENT

1. I have been retained by Plaintiff Sonos, Inc. to provide my opinions on how a person of ordinary skill in the art (“POSITA”) at the time of the inventions of U.S. Patent Nos. 9,967,615 (“’615 Patent”) and 10,779,033 (“’033 Patent”) would have understood the following claim terms:

Patent	Term
’033 Patent	“data network”
’615 Patent	“local area network”
’615 Patent	“a media particular playback system”

2. This Declaration explains my analysis and opinions of the above-identified claim terms that are used in the ’615 or ’033 Patent. In forming my opinions, I have read and understand the claims of the ’615 and ’033 Patents, the specification that is common to both the ’615 and ’033 Patents, and each of the patents’ respective file histories.

3. I reserve the right to supplement or clarify the opinions set forth herein, and if I am requested to do so, to provide additional opinions regarding the ’615 and/or ’033 Patents.

4. I am being compensated at my normal hourly consulting rate of \$550/hour for this matter. My compensation does not depend in any way on the nature of my opinions or the outcome of this case.

II. SUMMARY OF OPINIONS

5. As explained in detail herein, it is my opinion that a POSITA at the time of the inventions of the '615 and '033 Patents would have understood the above-identified claim terms as follows:

Patent	Term	POSITA's Understanding
'033 Patent	"data network"	"a medium that interconnects devices, enabling them to send digital data packets to and receive digital data packets from each other"
'615 Patent	"local area network"	"data network that interconnects devices within a limited area, such as a home or office"
'615 Patent	"a media particular playback system"	"a media playback system"

6. I understand that Sonos and/or Google may seek construction of claim terms in the '615 and/or '033 Patents other than those expressly addressed herein. I have not analyzed, and express no opinions on, the proper construction of any other claim term in the '615 or '033 Patents at this time.

III. BACKGROUND & QUALIFICATIONS

7. I am the Cornelius Vanderbilt Professor of Engineering in the Department of Electrical Engineering and Computer Science at Vanderbilt University in Nashville, TN, where I also serve as the Associate Provost for Research Development and Technologies and the co-Director of the Data Science Institute. My research spans a broad range of software systems, including distributed object computing, middleware platforms, real-time operating systems, and

distributed real-time and embedded systems. I became a Full Professor with tenure at Vanderbilt University in January 2003.

8. I received my Doctor of Philosophy (Ph.D.) degree in Computer Science from the University of California (UC) Irvine in Irvine, CA in 1994. I also earned a Master's Degree in Computer Science from UC Irvine in 1990, as well as a Bachelor's Degree in Sociology in 1984 and Master's Degree in Sociology in 1986 from the College of William and Mary in Williamsburg, VA. I first started programming in 1983 when I was an undergraduate student taking statistics courses. From 1985 through 1994 I learned how to program in Pascal, C, C++, Ada, Prolog, and Lisp, both at the College of William and Mary and at UC Irvine.

9. I have been a full-time university professor since 1994. I was previously a tenured professor at the University of California, Irvine in the Electrical and Computer Engineering department, from 2000 to 2003, and before that at Washington University in St. Louis, MO in the Computer Science and Engineering department and the Mallinckrodt Institute of Radiology, from 1994 to 1999. In addition, I served as the Chief Technology Officer and Deputy Director for the Software Engineering Institute (SEI) at Carnegie Mellon University from 2010 to 2012, where I led the SEI's research, development, and operational efforts related to software engineering and cyber-security.

10. For the past three decades, my research has focused on distributed real-time and embedded (DRE) systems, which has yielded the ACE, Java ACE, TAO, and CIAO middleware frameworks. The millions of lines of object-oriented code in these frameworks provide layers of infrastructure and distribution middleware that simplify the development of concurrent and networked software apps and services. These middleware frameworks constitute some of the most successful examples of software research and development (R&D) ever transitioned from

research to industry, being widely used by thousands of companies and agencies worldwide in many domains, including national defense and homeland security, datacom/telecom, financial services, healthcare, and online gaming.

11. My research on DRE systems has been funded by various organizations, including both federal agencies, such as DARPA, NSF, NASA, NIH, the U.S. Air Force, and the U.S. Navy, as well as leading companies, such as Northrup Grumman, Raytheon, Lockheed-Martin, Boeing, McDonnell-Douglas, General Electric, Siemens Medical Engineering, and Kodak Health Imaging Systems. I have also received other honors and awards, including election to professional organizations, engagements for invited talks, and the 2015 Award for Excellence in Teaching from the Vanderbilt University Department of Electrical Engineering.

12. Besides my academic and research experience, from 2010 to 2014, I served as a member of the United States Air Force Scientific Advisory Board (SAB), where I was the Vice Chair of the SAB's Cyber Situational Awareness study, which conducted a comprehensive review of the U.S. Air Force's tactics, techniques, and procedures related to secure network-centric mission operations. I have also served on the Advisory Board for the U.S. Naval Air Systems Command (NavAir) Future Airborne Capability Environment (FACE) and was a co-lead of a task force on "Published Open Interfaces and Standards" for the U.S. Navy's Open Systems Architecture initiative.

13. For over 30 years, I have conducted and supervised many research projects involving a wide range of software-related topics, including patterns, optimization techniques, and empirical analyses of communication protocol stacks, web servers, and object-oriented middleware frameworks for distributed real-time embedded systems and mobile-/web-based cloud computing applications. I have published 650+ scholarly articles and technical papers, and

I am the co-author/editor of 10+ books or book-length manuscripts on various topics, including software architecture, network programming, object-oriented frameworks, distributed and real-time systems, open-source middleware platforms, and web-/mobile-based cloud computing applications.

14. My work has been cited 42,500+ times across a comprehensive spectrum of high-impact publications, and my current h-index¹ score is 86, which reveals the significant impact of my publications on scholarly literature in the field of computer science. I have also supervised the research of more than 40 PhD and Master's graduate students to date. Together with conducting and publishing my own research, I have served on the editorial board of many journals, including publications by IEEE and the ACM, and I have been a guest editor of many special issue journals based on my research expertise.

15. On top of my research experience, I have decades of hands-on programming experience with a variety of different programming languages. I began programming with C in 1985 and have programmed with object-oriented languages since 1986, when I began to program with C++. I have programmed with Java and other related object-oriented languages since the mid-1990s and early 2000s. Starting in 1991, while at the University of California Irvine, I led the development of one of the first C++ object-oriented frameworks for concurrent and networked middleware and applications (ACE). Starting in 1996, I developed one of the first Java object-oriented frameworks for concurrent and networked middleware and applications (Java ACE).

¹ The h-index is a popular measure of scholarly productivity. The definition of the index is that a scholar with an index of h has published h papers each of which has been cited in other papers at least h times. Thus, the h-index reflects both the number of publications and the number of citations per publication.

16. Since 1990, I have taught more than 2,000 students in dozens of face-to-face courses on network programming to both undergraduate and graduate students at UC Irvine, Washington University St. Louis, and Vanderbilt University. Since 2013, I have taught mobile cloud computing to more than 400,000 students in online courses, including Massive Open Online Courses (MOOCs) on the Coursera platform, which have focused on technologies like mobile app programming with Android, Java, and JavaScript, as well as programming cloud computing platforms using various web services frameworks, such as Spring and Node.js.

17. Together with my regular course offerings, over the past 30 years I have also taught 600+ short-courses and tutorials on many subjects, including: software design patterns, object-oriented and functional programming; systems programming and network programming for UNIX and Windows; multi-threading and synchronization; concurrent and parallel programming; and various courses on distributed systems, real-time and embedded systems, TCP/IP, web apps and services, compiler construction, algorithms, and data structures.

18. My complete qualifications and professional experiences are described in my curriculum vitae, provided as Appendix A.

IV. LEGAL STANDARDS

19. I am not an attorney, but I have been informed by counsel about legal standards relevant to my opinions.

20. I understand that claim construction begins with the language of the claims themselves. Claim terms are generally given their ordinary and customary meaning as understood by a person of ordinary skill in the art (“POSITA”) when viewing the claim terms in the context of the entire patent.

21. I understand that, in some cases, the plain and ordinary meaning of a claim term may be readily apparent and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words.

22. I understand that, in other cases, a claim term may have a specialized meaning in which case it is often necessary to look to the intrinsic evidence—which I understand to include the claims, the specification, and the prosecution/file history of the patent at issue—to construe the claim term. Indeed, I understand that the context in which a term is used in a claim can be highly instructive. I also understand that the specification is highly relevant to claim construction and can be the single best guide in determining the meaning of a claim term. In this respect, I understand that a claim construction that stays true to the claim language and most naturally aligns with the specification will be the correct construction. Accordingly, I understand that I must refrain from importing limitations into the claims that are not required by the intrinsic evidence.

23. Moreover, I understand that extrinsic evidence – dictionaries, treatises, and the like – can also be used to assist with claim construction. However, I understand that intrinsic evidence is often more reliable than the extrinsic evidence.

V. LEVEL OF ORDINARY SKILL IN THE ART

24. I have been asked to offer my opinion regarding the level of ordinary skill in the art with respect to the '615 and '033 Patents.

25. To assess the level of ordinary skill in the art, I understand one considers the type of problems encountered in the art, the prior solutions to those problems, the rapidity with which innovations are made, the sophistication of the technology, and the level of education of active workers in the field.

26. To assess the level of ordinary skill in the art of the '615 and '033 Patents here, I have reviewed the '615 and '033 Patents and related documents and considered the type of problems encountered in the art, the prior solutions to those problems, the rapidity with which innovations are made, the sophistication of the technology, and the level of education of active workers in the field. In addition, I considered my own experience teaching and performing research in the networking and consumer audio systems fields, as well as my experience collaborating and consulting with concerns in these industries.

27. Based on my assessment and my personal knowledge and experience in the fields of networking and consumer audio systems, including the configuration and/or control of networked devices, it is my opinion that a person of ordinary skill in the art for purposes of the '615 and '033 Patents is a person having the equivalent of a four-year degree from an accredited institution (typically denoted as a B.S. degree) in computer science, computer engineering, electrical engineering, or an equivalent thereof, and approximately 2-4 years of professional experience in the fields of networking and network-based systems or applications, such as consumer audio systems, or an equivalent level of skill, knowledge, and experience.

28. Moreover, based on my education, training, and professional experience discussed in my CV and background, I am very familiar with the level of knowledge and abilities of a person of ordinary skill in the art at the time of the inventions of the '615 and '033 Patents.

29. In forming the opinions set forth herein, I applied the level of ordinary skill in the art set forth above.

VI. OVERVIEW OF THE '615 & '033 PATENTS

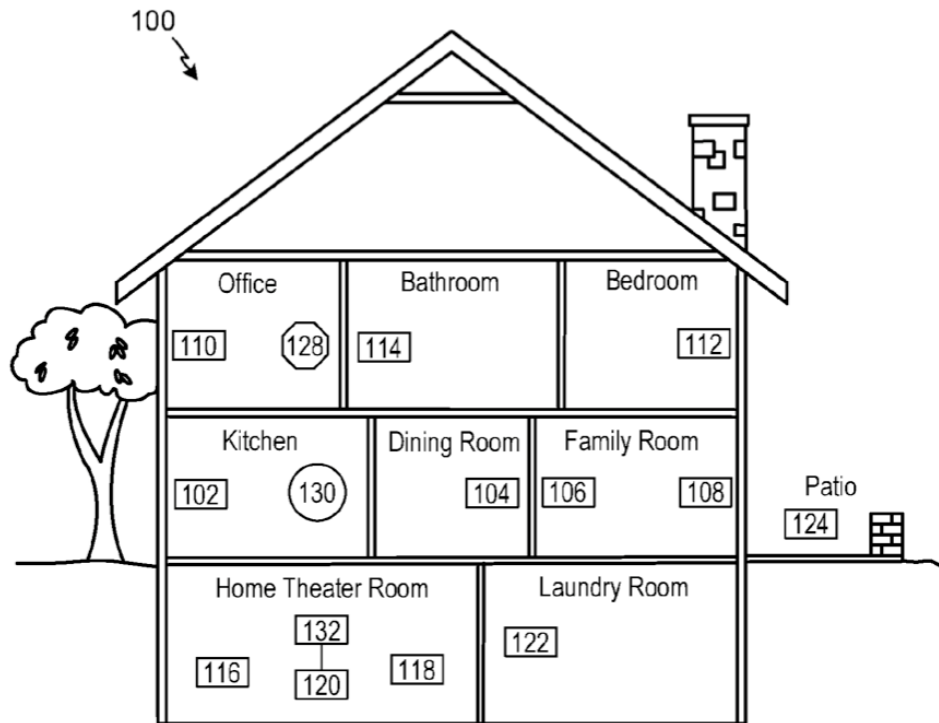
30. The '615 and '033 Patents are part of the same patent family and stem from the same original patent application, application number 13/341,237 (the "'237 Application"), filed

by Sonos on December 30, 2011. In particular, the '615 Patent was filed on February 23, 2015 and is a direct continuation of the '237 Application. The '033 Patent was filed on April 19, 2019, is part of a different branch in this patent family than the '615 Patent, and ultimately claims priority back to the '237 Application through a sequence of continuations. For this Declaration, I have been asked to assume that the invention date for the '615 and '033 Patents is December 30, 2011.

31. The '615 and '033 Patents share a common specification. Thus, for consistency, my citations in this Declaration to the disclosures in this common specification are with reference to the column and line numbers of the '615 Patent's specification. That said, it should be understood that the same teachings are also found in the '033 Patent's specification.

32. The '615 Patent describes a "local playback system" (sometimes referred to as a "home music system" or "household playback system") comprising one or more "playback devices" (also referred to as "zone players") that connect to a local "data network" (also referred to as a "local area network") and are capable of playing back multimedia content, such as audio. *See, e.g.*, '615 Patent at 1:13-15, 1:66-2:9, 2:51-3:13, 3:28-31, 5:21-54, 10:64-66, 12:44-67, 16:1-8. The '615 Patent further describes control devices (e.g., "network-enabled portable devices," such as smart phones) that also connect to the local "data network" and are capable of controlling the operation of the "local playback system" (such a control device is sometimes referred to as a "controller"). *See, e.g., id.* at 3:18-37, 4:52-5:11.

33. Figure 1 of the '615 Patent provides an illustrative example of a "local playback system" at a user's home comprising a variety of "playback devices" 102-124, a control device 130, and a "data network 128":



See, e.g., id. at 3:18-37, 5:21-28. It is my opinion that a POSITA would understand that “data network 128” represents a local area network (LAN). *See, e.g., id.* at 10:64-66, 16:1-8.

34. The '615 Patent also provides an illustrative example of a local “data network” that takes the form of an “Ad-Hoc network 610” and is communicatively coupled to a “cloud-based” “data network” (e.g., the Internet):

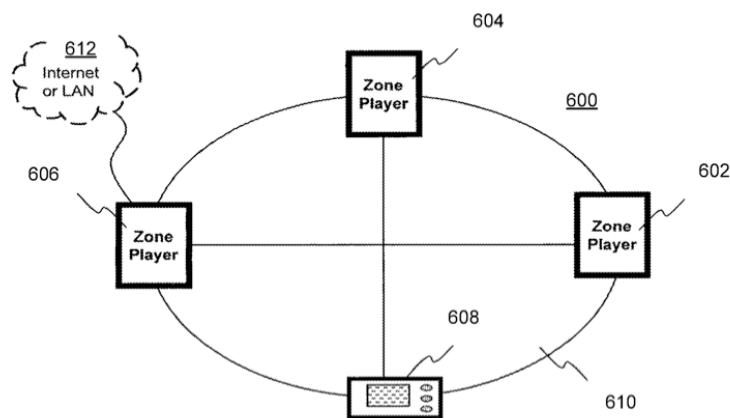


FIGURE 6

See, e.g., id. at 10:56-12:3.

35. In the disclosed “local playback system,” each “playback device” is capable of communicating over the local “data network” with various other networked devices, including one or more other “playback devices,” one or more control devices, and one or more local audio sources. *See, e.g.*, ’615 Patent at 4:40-52, 6:61-7:12, 7:37-66, 8:12-16, 10:66-11:9, FIGS. 1, 6. Likewise, each “playback device” and control device is capable of communicating over a wide-area network (e.g., via the local “data network”), such as to retrieve audio from an Internet-based audio source. *See, e.g.*, ’615 Patent at 5:38-41, 6:64-7:12, 12:44-67, FIG. 6.

36. The ’615 Patent further provides an illustrative example of a system architecture including a cloud-based “data network” (e.g., the Internet) and multiple “local playback systems” on respective local “data networks” (760, 770):

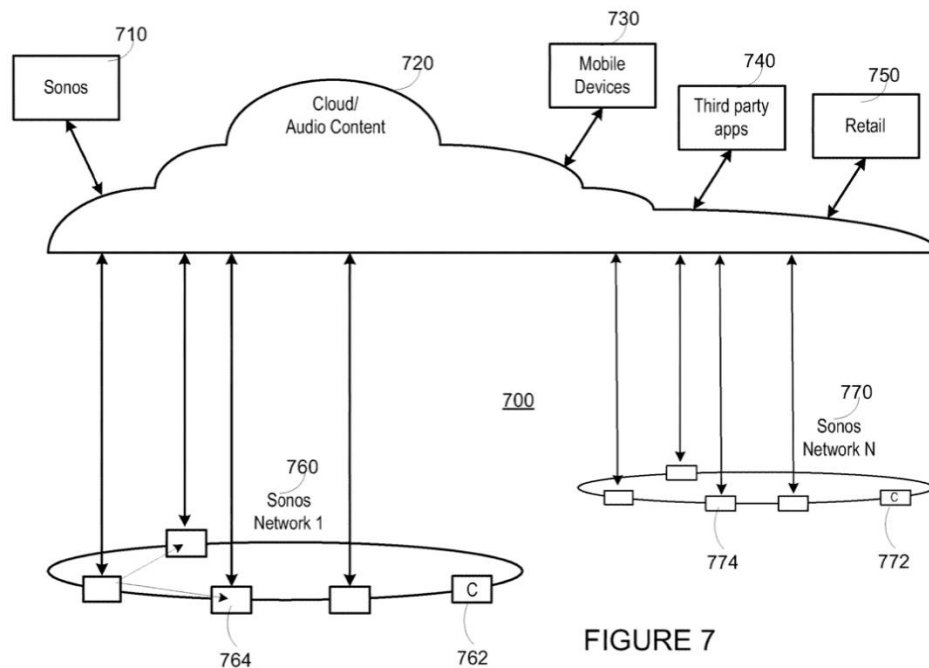


FIGURE 7

See, e.g., ’615 Patent at 12:19-43, 16:1-8.

37. The ’615 Patent explains that the communications over the local and cloud “data networks” are in the form of digital data “packets” and are in accordance with one or more

standard communication protocols, such as IEEE 802.11a, 802.11b, 802.11g, 802.11n, 802.15, or 802.3. *See, e.g.*, '615 Patent at 7:37-66, 11:45-51.

38. As disclosed in the '615 Patent, control devices and “playback devices” may communicate with one another over a cloud-based “data network” to facilitate transferring playback from one device to another. For instance, the '615 Patent discloses a variety of situations where a user is listening on his/her personal computing device to music from an Internet-based, music application (e.g., Pandora, Rhapsody, Spotify, etc.) and decides to instead have that playback be transferred to one or more “playback devices” in his/her “local playback system.” *See, e.g.*, '615 Patent at 12:44-13:30. The example cloud-based system architecture illustrated in Figure 7 of the '615 Patent enables the user’s personal computing device to communicate with one or more cloud-based servers to facilitate the transfer of playback from the personal computing device to one or more “playback devices” in a “local playback system.” *See, e.g., id.* at 12:19-43, 15:18-46, 16:1-8, 17:12-20.

VII. “DATA NETWORK”

39. The first term that I was asked to analyze is “data network,” which is found in the independent claims of the '033 Patent. I understand that Sonos and Google have offered the following constructions for this term:

Sonos’s Proposed Construction	Google’s Proposed Construction
“a medium that interconnects devices, enabling them to send digital data packets to and receive digital data packets from each other”	Plain and ordinary meaning; no construction necessary at this time

40. It is my opinion that Sonos’s proposed construction is consistent with how a POSITA would have interpreted the term “data network” in the context of the '033 Patent (and '615 Patent) because it appropriately specifies that a “data network” (i) is a medium that

- SONOS-SVG2-00018417 at 20 [Duck & Reed, *Data Communications and Computer Networks for Computer Scientists and Engineers*, 2nd Edition (2003)] (“LANs generally encompass a ***small physical area*** . . . and are usually ***confined within a single site.***”)
- SONOS-SVG2-00018301 at 12 [Douglas E. Comer, *Computer Networks And Internets*, 2nd Edition (1999)] (“Designed for use over a ***small distance (e.g., in a building)***, a LAN does not need a separate wire between each pair of computers.”)

97. As with the terms “data network,” “packet network,” “data communications network,” and “computer network,” I note that the meaning of the term “local area network” has not materially changed from the 2000 timeframe up to today.

98. Thus, both the intrinsic and extrinsic evidence support my opinion that a POSITA would understand that the term “local area network” in the context of the ’615 Patent refers to a “data network” that interconnects devices within a ***limited*** area, such as a home or office.

IX. “A MEDIA PARTICULAR PLAYBACK SYSTEM”

99. The final term that I analyzed is “a media particular playback system,” which is found in dependent claims 3, 15, and 26 of the ’615 Patent. I understand that Sonos contends that the word “particular” was erroneously included in this phrase and thus, this phrase should instead read “a media playback system.” On the other hand, I understand that Google contends that this phrase is indefinite.

100. In my opinion, a POSITA having read any of dependent claims 3, 15, or 26 would readily understand that the word “particular” was erroneously included in the phrase “a media particular playback system” and that the phrase should instead read “a media playback system,” as Sonos contends.

101. Each of dependent claims 3, 15, and 26 recites the same additional limitations to its respective independent claim. I have reproduced the claim language for each of these claims below with the phrase at issue highlighted in red.

3. The method of claim 1, wherein detecting the set of inputs to transfer playback from the control device to the particular playback device comprises detecting a set of inputs to transfer playback from the control device to a particular zone group of **a media particular playback system** that includes a first zone and a second zone, wherein the first zone includes the particular playback device and the second zone includes at least one additional playback device, wherein modifying the one or more transport controls of the control interface to control playback by the playback device comprises causing the one or more transport controls of the control interface to control playback by the particular playback device and the at least one additional playback device in synchrony, and wherein the particular playback device playing back the retrieved multimedia content comprises the particular playback device and the at least one additional playback device playing back the multimedia content in synchrony.

15. The tangible, non-transitory computer readable medium of claim 13, wherein detecting the set of inputs to transfer playback from the control device to the particular playback device comprises detecting a set of inputs to transfer playback from the control device to a particular zone group of **a media particular playback system** that includes a first zone and a second zone, wherein the first zone includes the particular playback device and the second zone includes at least one additional playback device, wherein modifying the one or more transport controls of the control interface to control playback by the playback device comprises causing the one or more transport controls of the control interface to control playback by the particular playback device and the at least one additional playback device in synchrony, and wherein the particular playback device playing back the retrieved multimedia content comprises the particular playback device and the at least one additional playback device playing back the multimedia content in synchrony.

26. The control device of claim 25, wherein detecting the set of inputs to transfer playback from the control device to the particular playback device comprises detecting a set of inputs to transfer playback from the control device to a particular zone group of **a media particular playback system** that includes a first zone and a second zone, wherein the first zone includes the particular playback device and the second zone includes at least one additional playback device, wherein modifying the one or more transport controls of the control interface to control playback by the playback device comprises causing the one or more transport controls of the control interface to control playback by the particular playback device and the at least one additional playback device in synchrony, and wherein the particular playback device playing back the retrieved multimedia content comprises the particular playback device and the at least one additional playback device playing back the multimedia content in synchrony.

102. In my opinion, it is evident from the face of the '615 Patent to a POSITA that the phrase "a media particular playback system" contains a typographical error -- namely, the

inadvertent inclusion of the word “particular.” Indeed, in reading the claims in their entirety, a POSITA would recognize that the specific sequence of words in the phrase “a media particular playback” is unnatural and not how a POSITA would purposefully write in this context.

103. Moreover, other claims of the '615 Patent would confirm to a POSITA that the inclusion of the word “particular” in the phrase “a media particular playback system” was a typographical error.

104. For example, as shown below, dependent claims 2 and 3 each have similar structure but claim 2 includes the more natural phrase “a media playback system” (highlighted in green), whereas claim 3 includes the phrase “a media particular playback system”:

2. The method of claim 1,	3. The method of claim 1,
wherein detecting the set of inputs to transfer playback from the control device to the particular playback device comprises detecting a set of inputs to transfer playback from the control device to a particular zone of a media playback system that includes the particular playback device as a first channel of a stereo pair and an additional playback device as a second channel of the stereo pair,	wherein detecting the set of inputs to transfer playback from the control device to the particular playback device comprises detecting a set of inputs to transfer playback from the control device to a particular zone group of a media particular playback system that includes a first zone and a second zone, wherein the first zone includes the particular playback device and the second zone includes at least one additional playback device,
wherein modifying the one or more transport controls of the control interface to control playback by the particular playback device comprises causing the one or more transport controls of the control interface to control playback by the particular playback device and the additional playback device, and	wherein modifying the one or more transport controls of the control interface to control playback by the playback device comprises causing the one or more transport controls of the control interface to control playback by the particular playback device and the at least one additional playback device in synchrony, and
wherein the particular playback device playing back the retrieved multimedia content comprises the particular playback device and the additional playback device playing back the multimedia content as the stereo pair.	wherein the particular playback device playing back the retrieved multimedia content comprises the particular playback device and the at least one additional playback device playing back the multimedia content in synchrony.

105. As another example, as shown below, dependent claims 14 and 15 each have similar structure but claim 14 includes the more natural phrase “a media playback system” (highlighted in green), whereas claim 15 includes the phrase “a media particular playback system”:

14. The tangible, non-transitory computer readable medium of claim 13,	15. The tangible, non-transitory computer readable medium of claim 13,
wherein detecting the set of inputs to transfer playback from the control device to the particular playback device comprises detecting a set of inputs to transfer playback from the control device to a particular zone of a media playback system that includes the particular playback device as a first channel of a stereo pair and an additional playback device as a second channel of the stereo pair,	wherein detecting the set of inputs to transfer playback from the control device to the particular playback device comprises detecting a set of inputs to transfer playback from the control device to a particular zone group of a media particular playback system that includes a first zone and a second zone, wherein the first zone includes the particular playback device and the second zone includes at least one additional playback device,
wherein modifying the one or more transport controls of the control interface to control playback by the particular playback device comprises causing the one or more transport controls of the control interface to control playback by the particular playback device and the additional playback device, and	wherein modifying the one or more transport controls of the control interface to control playback by the playback device comprises causing the one or more transport controls of the control interface to control playback by the particular playback device and the at least one additional playback device in synchrony, and
wherein the particular playback device playing back the retrieved multimedia content comprises the particular playback device and the additional playback device playing back the multimedia content as the stereo pair.	wherein the particular playback device playing back the retrieved multimedia content comprises the particular playback device and the at least one additional playback device playing back the multimedia content in synchrony.

106. Given the parallelisms between claims 2 and 3 and claims 14 and 15, it is my opinion that a POSITA would understand that Sonos intended for (i) claim 3 to recite “a media playback system,” as recited in claim 2, and (ii) claim 15 to recite “a media playback system,” as recited in claim 14.

107. In addition to the above-discussed claim language, the specification of the '615 Patent confirms that the only reasonable correction to the erroneous phrase “a media particular playback system” is to remove the word “particular.”

108. For starters, the inventions of the '615 Patent are generally described in the context of a “local playback system” that includes “one or more multimedia playback devices,” which a POSITA would understand is an example of what the phrase “media playback system” refers to. *See, e.g.*, '615 Patent at 2:51-57, 2:60-3:1, 12:44-67.

109. Moreover, neither the phrase “media particular” nor “multimedia particular” is found anywhere in the '615 Patent other than in claims 3, 15, and 26. On the other hand, the phrases “media playback” or “multimedia playback” (without the intervening word “particular”) can be found throughout the '615 Patent. *See, e.g.*, Abstract, 1:66-2:1, 2:51-57, 2:60-3:1, 3:5-13, 15:51-57, 16:11-13, 16:35-40, claims 2, 14. In my opinion, this would lead a POSITA to understand that the phrase “a media particular playback system” was a typographical error.

110. Further still, I have seen nothing in the prosecution history of the '615 Patent that would suggest to a POSITA that any other reasonable correction to the phrase “a media particular playback system” would be appropriate. In fact, the prosecution history confirms that the only reasonable correction is to remove the word “particular.”

111. For instance, on October 25, 2016, Sonos amended then-pending independent claim 1, in relevant part, as follows (with underlining indicating additions and strikethroughs indicating deletions):

causing, via a control device, a graphical interface to display a control interface including one or more transport controls to control playback by the control device;
after connecting to a local area network via a network interface, identifying, via the control device, playback devices connected to the local area network;
causing, via the control device, the graphical interface to display a selectable option for transferring playback from the control device;

detecting, via the control device, a set of inputs to transfer playback from the control device to a particular playback device, wherein ~~detecting~~ the set of inputs comprises: (i) a selection of the selectable option for transferring playback from the control device and (ii) a selection of the particular playback device from the identified playback devices connected to the local area network

Oct. 25, 2016 Office Action Response at p. 2 (underling and strikethroughs original) (attached as Appendix N). Sonos amended the other independent claims in a similar manner. *See id.* at pp. 6, 19. As I have highlighted in teal above, Sonos introduced the adjective “particular” before “playback device.”

112. To maintain proper antecedent basis and consistency throughout the claims, Sonos also propagated the adjective “particular” before “playback device” to the dependent claims, including dependent claims 3, 15, and 26. However, as shown below for dependent claim 3, Sonos inadvertently inserted the adjective “particular” before the word “playback” contained in the larger, original phrase “a media playback system” (highlighted in red):

3. The method of claim 1, wherein detecting the set of inputs to transfer playback from the control device to the particular playback device comprises detecting a set of inputs to transfer playback from the control device to a particular zone group of **a media particular playback system** that includes a first zone and a second zone, wherein the first zone includes the particular playback device and the second zone includes at least one additional playback device, wherein modifying the one or more transport controls of the control interface to control playback by the playback device comprises causing the one or more transport controls of the control interface to control playback by the particular playback device and the at least one additional playback device in synchrony, and wherein ~~initiating playback of the particular playback device playing back~~ the retrieved multimedia content comprises ~~initiating playback by the particular playback device and the at least one additional playback device~~ playing back the multimedia content in synchrony.

Oct. 25, 2016 Office Action Response at pp. 3-4 (underling and strikethroughs original). This same error was also propagated to the dependent claims that ultimately issued as dependent claim 15 and 26, each of which recites the same additional limitations as claim 3. *See id.* at pp. 7-8, 11.

113. In view of the foregoing, it is my opinion that a POSITA would understand that (i) the phrase “a media particular playback system” found in dependent claims 3, 15, and 26 contains an obvious error, (ii) the face of the ’615 Patent makes clear that the only reasonable correction for this error is to remove the word “particular” from the phrase, and (iii) there is nothing in the prosecution history suggesting any other reasonable correction should apply.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: April 27, 2021



DOUGLAS C. SCHMIDT

Appendix N

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
(Attorney Docket No. 11-1001-CON0115 (MBHB 14-1795-US3))**

In the Application of:)	
Arthur Coburn IV)	Examiner: Oschta Montoya
)	
Application No.: 14/628,952)	Group Art Unit: 2421
)	
Filing Date: Feb. 23, 2015)	Confirmation No.: 6897
)	
For: Networked Music Playback)	
)	
Mail Stop Amendment		
Commissioner for Patents		
P.O. Box 1450		
Alexandria, Virginia 22313		

RESPONSE TO NON-FINAL OFFICE ACTION MAILED JULY 25, 2016

Responsive to the Non-Final Office Action mailed July 25, 2016, Applicant respectfully requests reconsideration of the application in view of the following remarks. Applicant generally authorizes the Office to charge any underpayment or credit any overpayment to Deposit Account No. 13-2490 and to treat this or any subsequent communication that requires an extension of time as incorporating a request for such an extension.

Amendments to the Claims begin on page 2.

Remarks begin on page 14.

AMENDMENTS TO THE CLAIMS

1. (Currently amended) A method comprising:
 - causing, via a control device, a graphical interface to display a control interface including one or more transport controls to control playback by the control device;
 - after connecting to a local area network via a network interface, identifying, via the control device, playback devices connected to the local area network;
 - causing, via the control device, the graphical interface to display a selectable option for transferring playback from the control device;
 - detecting, via the control device, a set of inputs to transfer playback from the control device to a particular playback device, wherein ~~detecting~~ the set of inputs comprises: (i) a selection of the selectable option for transferring playback from the control device and (ii) a selection of the particular playback device from the identified playback devices connected to the local area network;
 - ~~detecting, via the control device, a first input comprising an identification of the playback device;~~
 - ~~detecting, via the control device, a second input comprising an identification of an item, wherein multimedia content associated with the item is retrievable from a content provider;~~
 - ~~detecting, via the control device, a trigger, wherein detecting the trigger comprises detecting one or more third inputs that are not the first input or the second input; and~~
 - after detecting the set of inputs to transfer playback from the control device to the particular playback device, causing playback to be transferred from the control device to the particular playback device, wherein transferring playback from the control device to the particular playback device comprises:
 - (a) causing one or more first cloud servers to add multimedia content to a local playback queue on the particular playback device;
 - (b) causing playback at the control device to be stopped; and
 - (c) modifying the one or more transport controls of the control interface to control playback by the playback device; and

causing the particular playback device to play back the multimedia content, wherein the particular playback device playing back the multimedia content comprises the particular playback device retrieving the multimedia content from one or more second cloud servers of a streaming content service and playing back the retrieved multimedia content

~~sending, via a network interface, information regarding the multimedia content from the control device to the playback device, wherein the information comprises an identification of the multimedia content for playback by the playback device, and wherein the information causes the playback device to (a) retrieve, independent of the control device, the multimedia content from the content provider and (b) initiate playback of the retrieved multimedia content.~~

2. (Currently amended) The method of claim 1, wherein detecting the set of inputs to transfer playback from the control device to the particular playback device comprises detecting a set of inputs to transfer playback from the control device to a particular zone of a media playback system that includes the particular playback device as a first channel of a stereo pair and an additional playback device as a second channel of the stereo pair, wherein modifying the one or more transport controls of the control interface to control playback by the particular playback device comprises causing the one or more transport controls of the control interface to control playback by the particular playback device and the additional playback device, and wherein ~~initiating playback of~~ the particular playback device playing back the retrieved multimedia content comprises ~~initiating playback by~~ the particular playback device and the additional playback device playing back the multimedia content as the stereo pair.

3. (Currently amended) The method of claim 1, wherein detecting the set of inputs to transfer playback from the control device to the particular playback device comprises detecting a set of inputs to transfer playback from the control device to a particular zone group of a media particular playback system that includes a first zone and a second zone, wherein the first zone includes the particular playback device and the second zone includes at least one additional playback device, wherein modifying the one or more transport controls of the control interface to control playback by the playback device comprises causing the one or more transport controls of the control interface to control playback by the particular playback device and the at least one

additional playback device in synchrony, and wherein ~~initiating playback of the particular playback device playing back~~ the retrieved multimedia content comprises ~~initiating playback by the particular playback device and the at least one additional playback device playing back the multimedia content~~ in synchrony.

4. (Currently amended) The method of claim 1, wherein the control interface is displayed by an application associated with the ~~content provider~~ streaming content service, and wherein the set of inputs further detecting the one or more third inputs comprises detecting an input to select a link in the application associated with the ~~content provider~~ streaming content service and wherein selection of the link launches a second application to facilitate retrieving streaming of the multimedia content ~~[[to]] by the particular~~ playback device from a particular source indicated by a resource locator.

5. (Currently amended) The method of claim 1, wherein the control interface is displayed by an application associated with the ~~content provider~~ streaming content service, and wherein the set of inputs further detecting the one or more third inputs comprises detecting an input to select a link in the application associated with the ~~content provider~~ streaming content service and wherein selection of the link causes the control device to transmit ~~provides~~ information to the one or more first cloud servers ~~a server to begin multimedia content playback via~~ add multimedia content to the local playback queue on the particular playback device.

6. (Currently amended) The method of claim 1, further comprising detecting, via~~[[by]]~~ the control device, a set of inputs to transfer playback from the playback device back to the control device, wherein transferring playback from the playback device back to the control device comprises:

causing playback at the playback device to be stopped; and

modifying the one or more transport controls of the control interface to control playback by the control device.

7. (Currently amended) The method of claim 1, wherein causing the graphical interface to display the control interface including one or more transport controls to control playback by the control device comprises causing the graphical interface to display a control interface that includes the one or more transport controls in a particular arrangement on the graphical interface, and wherein modifying the one or more transport controls of the control interface to control playback by the particular playback device comprises causing the graphical interface to display the one or more transport controls to control playback by the particular playback device while in the particular arrangement.

8. (Currently amended) The method of claim 1, wherein ~~sending information regarding the multimedia content from the control device to the playback device comprises sending, via a local area network, an identifier indicating~~ causing the one or more first cloud servers to add multimedia content to the local playback queue comprises causing an identifier of the multimedia content to be added to the local playback queue, wherein the identifier indicates a particular source of the multimedia content at the one or more second cloud servers of the streaming content service, wherein the particular playback device receives the multimedia content from the particular source at the one or more second cloud servers of the streaming content service.

9. (Currently amended) The method of claim 1, ~~wherein sending information regarding the multimedia content from the control device to the playback device comprises sending information regarding the multimedia content from the control device to a server that provides the multimedia content to the playback device~~

wherein causing one or more first cloud servers to add the multimedia content to the local playback queue on the particular playback device comprises sending a message to the streaming content service that causes the one or more first cloud servers to add the multimedia content to the local playback queue on the particular playback device.

10. (Currently amended) A tangible, non-transitory computer readable storage medium including instructions for execution by a processor, the instructions, when executed, cause a control device to implement a method comprising:

causing a graphical interface to display a control interface including one or more transport controls to control playback by the control device;

after connecting to a local area network via a network interface, identifying playback devices connected to the local area network;

causing the graphical interface to display a selectable option for transferring playback from the control device;

detecting a set of inputs to transfer playback from the control device to a particular playback device, wherein ~~detecting~~ the set of inputs comprises: (i) a selection of the selectable option for transferring playback from the control device and (ii) a selection of the particular playback device from the identified playback devices connected to the local area network;

~~detecting a first input comprising an identification of the playback device;~~

~~detecting a second input comprising an identification of an item, wherein multimedia content associated with the item is retrievable from a content provider;~~

~~detecting a trigger, wherein detecting the trigger comprises detecting one or more third inputs that are not the first input or the second input; and~~

after detecting the set of inputs to transfer playback from the control device to the particular playback device, causing playback to be transferred from the control device to the particular playback device, wherein transferring playback from the control device to the particular playback device comprises:

(a) causing one or more first cloud servers to add multimedia content to a local playback queue on the particular playback device;

(b) causing playback at the control device to be stopped; and

(c) modifying the one or more transport controls of the control interface to control playback by the playback device; and

causing the particular playback device to play back the multimedia content, wherein the particular playback device playing back the multimedia content comprises the particular

playback device retrieving the multimedia content from one or more second cloud servers of a streaming content service and playing back the retrieved multimedia content

~~sending, via a network interface, information regarding the multimedia content from the control device to the playback device, wherein the information comprises an identification of the multimedia content for playback by the playback device, and wherein the information causes the playback device to (a) retrieve, independent of the control device, the multimedia content from the content provider and (b) initiate playback of the retrieved multimedia content.~~

11. (Currently amended) The tangible, non-transitory computer readable medium of claim 10, wherein detecting the set of inputs to transfer playback from the control device to the particular playback device comprises detecting a set of inputs to transfer playback from the control device to a particular zone of a media playback system that includes the particular playback device as a first channel of a stereo pair and an additional playback device as a second channel of the stereo pair, wherein modifying the one or more transport controls of the control interface to control playback by the particular playback device comprises causing the one or more transport controls of the control interface to control playback by the particular playback device and the additional playback device, and wherein ~~initiating playback of the particular playback device playing back~~ the retrieved multimedia content comprises ~~initiating playback by~~ the particular playback device and the additional playback device playing back the multimedia content as the stereo pair.

12. (Currently amended) The tangible, non-transitory computer readable medium of claim 10, wherein detecting the set of inputs to transfer playback from the control device to the particular playback device comprises detecting a set of inputs to transfer playback from the control device to a particular zone group of a media particular playback system that includes a first zone and a second zone, wherein the first zone includes the particular playback device and the second zone includes at least one additional playback device, wherein modifying the one or more transport controls of the control interface to control playback by the playback device comprises causing the one or more transport controls of the control interface to control playback by the particular playback device and the at least one additional playback device in synchrony,

and wherein ~~initiating playback of~~ the particular playback device playing back the retrieved multimedia content comprises ~~initiating playback by the particular~~ playback device and the at least one additional playback device playing back the multimedia content in synchrony.

13. (Currently amended) The tangible, non-transitory computer readable medium of claim 10, wherein the control interface is displayed by an application associated with the ~~content provider~~ streaming content service, and wherein the set of inputs further detecting the one or more third inputs comprises detecting an input to select a link in the application associated with the ~~content provider~~ streaming content service and wherein selection of the link launches a second application to facilitate retrieving streaming of the multimedia content ~~[[to]]~~ by the particular playback device from a particular source indicated by a resource locator.

14. (Currently amended) The tangible, non-transitory computer readable medium of claim 10, wherein the control interface is displayed by an application associated with the ~~content provider~~ streaming content service, and wherein the set of inputs further detecting the one or more third inputs comprises detecting an input to select a link in the application associated with the ~~content provider~~ streaming content service and wherein selection of the link causes the control device to transmit ~~provides~~ information to the one or more first cloud servers ~~a server~~ to begin multimedia content playback via add multimedia content to the local playback queue on the particular playback device.

15. (Currently amended) The tangible, non-transitory computer readable medium of claim 10, wherein the method further comprises further comprising ~~further comprising~~ detecting, ~~by the control device~~, a set of inputs to transfer playback from the playback device back to the control device, wherein transferring playback from the playback device back to the control device comprises:
causing playback at the playback device to be stopped; and
modifying the one or more transport controls of the control interface to control playback
by the control device.

16. (Currently amended) The tangible, non-transitory computer readable medium of claim 10, wherein causing ~~the~~^{[[a]]} graphical interface to display the control interface including one or more transport controls to control playback by the control device comprises causing the graphical interface to display a control interface that includes the one or more transport controls in a particular arrangement on the graphical interface, and wherein modifying the one or more transport controls of the control interface to control playback by the playback device comprises causing the graphical interface to display the one or more transport controls to control playback by the playback device ~~while~~ in the particular arrangement.

17. (Currently amended) The tangible, non-transitory computer readable medium of claim 10, wherein ~~sending information regarding the multimedia content from the control device to the playback device comprises sending, via a local area network, an identifier indicating~~ causing the one or more first cloud servers to add multimedia content to the local playback queue on the particular playback device comprises causing an identifier of the multimedia content to be added to the local playback queue, wherein the identifier indicates a particular source of the multimedia content at the one or more second cloud servers of the streaming content service, wherein the particular playback device receives the multimedia content from the particular source at the one or more second cloud servers of the streaming content service.

18. (Currently amended) The tangible, non-transitory computer readable medium of claim 10,

~~wherein sending information regarding the multimedia content from the control device to the playback device comprises sending information regarding the multimedia content from the control device to a server that provides the multimedia content to the playback device~~

wherein causing one or more first cloud servers to add the multimedia content to the local playback queue on the particular playback device comprises sending a message to the streaming content service that causes the one or more first cloud servers to add the multimedia content to the local playback queue on the particular playback device.

19. (Currently amended) A control device comprising:

a graphical interface;
a wireless communication interface to communicate with a playback device;
one or more processors;
tangible non-transitory computer-readable media having instructions encoded therein,
wherein the instructions, when executed by the one or more processors, cause the control device
to perform functions comprising:

causing the graphical interface to display a control interface including one or
more transport controls to control playback by the control device;

after connecting to a local area network via the wireless communication interface,
identifying playback devices connected to the local area network;

causing the graphical interface to display a selectable option for transferring
playback from the control device;

detecting a set of inputs to transfer playback from the control device to a
particular playback device, wherein ~~detecting~~ the set of inputs comprises: (i) a selection
of the selectable option for transferring playback from the control device and (ii) a
selection of the particular playback device from the identified playback devices
connected to the local area network;

~~detecting a first input comprising an identification of the playback device;~~

~~detecting a second input comprising an identification of an item, wherein~~
~~multimedia content associated with the item is retrievable from a content~~
~~provider;~~

~~detecting a trigger, wherein detecting the trigger comprises detecting one~~
~~or more third inputs that are not the first input or the second input; and~~

after detecting the set of inputs to transfer playback from the control device to the
particular playback device, causing playback to be transferred from the control device to
the particular playback device, wherein transferring playback from the control device to
the particular playback device comprises:

(a) causing one or more first cloud servers to add multimedia content to a
local playback queue on the particular playback device;

(b) causing playback at the control device to be stopped; and

(c) modifying the one or more transport controls of the control interface to control playback by the playback device; and

causing the particular playback device to play back the multimedia content, wherein the particular playback device playing back the multimedia content comprises the particular playback device retrieving the multimedia content from one or more second cloud servers of a streaming content service and playing back the retrieved multimedia content

~~sending, via the wireless communication interface, information regarding the multimedia content from the control device to the playback device, wherein the information comprises an identification of the multimedia content for playback by the playback device, and wherein the information causes the playback device to (a) retrieve, independent of the control device, the multimedia content from the content provider and (b) initiate playback of the retrieved multimedia content.~~

20. (Currently amended) The control device of claim 19, wherein detecting the set of inputs to transfer playback from the control device to the particular playback device comprises detecting a set of inputs to transfer playback from the control device to a particular zone group of a media particular playback system that includes a first zone and a second zone, wherein the first zone includes the particular playback device and the second zone includes at least one additional playback device, wherein modifying the one or more transport controls of the control interface to control playback by the playback device comprises causing the one or more transport controls of the control interface to control playback by the particular playback device and the at least one additional playback device in synchrony, and wherein ~~initiating playback of the particular playback device playing back~~ the retrieved multimedia content comprises ~~initiating playback by the particular playback device and the at least one additional playback device playing back the multimedia content~~ in synchrony.

21. (Currently amended) The method of claim 1, wherein detecting the set of inputs comprises ~~one or more third inputs~~ comprises detecting ~~an input that causes transfer of playback from the controller to the playback device~~ a selection of the multimedia content.

22. (Currently amended) The method of claim 1, wherein detecting the set of inputs comprises ~~one or more third inputs~~ comprises detecting an input that causes playback at the control device ~~controller~~ to be stopped.

23. (Currently amended) The method of claim 1, wherein detecting the set of inputs comprises ~~one or more third inputs~~ detecting selection of a button on the control interface.

24. (Currently amended) The tangible, non-transitory computer readable medium of claim 10, wherein detecting the set of inputs comprises ~~one or more third inputs~~ comprises detecting ~~an input that causes transfer of playback from the controller to the playback device~~ a selection of the multimedia content.

25. (Currently amended) The tangible, non-transitory computer readable medium of claim 10, wherein detecting the set of inputs comprises ~~one or more third inputs~~ comprises detecting an input that causes playback at the control device ~~controller~~ to be stopped.

26. (Currently amended) The tangible, non-transitory computer readable medium of claim 10, wherein detecting the set of inputs comprises ~~one or more third inputs~~ detecting selection of a button on the control interface.

27. (Currently amended) The control device of claim 19, wherein detecting the set of inputs comprises ~~one or more third inputs~~ comprises detecting ~~an input that causes transfer of playback from the controller to the playback device~~ a selection of the multimedia content.

28. (Currently amended) The control device of claim 19, wherein detecting the set of inputs comprises ~~one or more third inputs~~ comprises detecting an input that causes playback at the control device controller to be stopped.

29. (Currently amended) The control device of claim 19, wherein detecting the set of inputs comprises ~~one or more third inputs~~ detecting selection of a button on the control interface.

REMARKS

1. Summary of the Office Action

In the non-final Office Action mailed July 25, 2016, the Examiner rejected claims 1, 6-10, 15-19, and 21-29 under pre-AIA 35 U.S.C. § 103(a) as being allegedly unpatentable over DaCosta (US 2008/0134256) in view of Dua (US 2006/0258289); rejected claims 3, 12, and 20 under pre-AIA 35 U.S.C. § 103(a) as being allegedly unpatentable over DaCosta in view of Dua in view of Millington (US 2012/0192071); and rejected claims 4-5 and 13-14 under pre-AIA 35 U.S.C. § 103(a) as being allegedly unpatentable over DaCosta in view of Dua in view of Zott (US 2009/0228919).

2. Status of the Claims

Currently pending are claims 1-29, of which claims 1, 10 and 19 are independent and the remainder are dependent. Claims 1-29 have been amended to further clarify aspects of the invention and to expedite prosecution. No new matter has been added.

3. Response to the § 103 Rejections

As noted above, the Examiner rejected claims 1, 9 and 20 under pre-AIA 35 U.S.C. § 103 as being allegedly unpatentable over DaCosta (US 2008/0134256) in view of Dua (US 2006/0258289). For at least the reason that the cited references do not teach the subject matter currently recited by Applicant's claims, the pending § 103 rejections should be withdrawn.

In view of the foregoing, Applicant requests that the pending art rejections of claims 1, 9 and 19 be withdrawn. In addition, the pending § 103 rejections of dependent claims 2-9, 11-18, and 20-29 should be withdrawn as well.

4. Conclusion

Applicant submits that claims 1-29 are in condition for allowance. Applicant does not acquiesce in any assertion by the Examiner that is not expressly addressed by these remarks. Should the Examiner wish to discuss this case with the undersigned, the Examiner is encouraged to call the undersigned at (312) 913-2128.

Respectfully submitted,
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